

Please type a plus sign (+) inside this box

PTO MRD 10/23/03

PTO/SB/08A (10-96)

Approved for use through 10/31/99 OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO-1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	To be assigned
		Filing Date	On even date herewith
		First Named Inventor	Yock, Paul G.
		Group Art Unit	3737 (prior app. S/N 10/438,111)
		Examiner Name	F. Jaworski
Sheet 1 of 6	Attorney Docket Number	701470.4086	

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
MA	AA	3,817,089		Eggleton et al.	06/1974	
	AB	3,779,234		Eggleton et al.	12/1973	
	AC	3,817,089		Eggleton et al.	06/1974	
	AD	3,938,502		Bom	02/1976	
	AE	3,942,530		Northeved	03/1976	
	AF	4,020,847		Clark, III	03/1977	
	AG	4,034,744		Goldberg	07/1977	
	AH	4,259,970		McLeod et al.	04/1981	
	AI	4,275,597		Quedens et al.	06/1981	
	AJ	4,319,580		Colley et al.	03/1982	
	AK	4,354,501		Colley et al.	10/1982	
	AL	4,374,525		Baba	02/1983	
	AM	4,391,282		Ando et al.	07/1983	
	AN	4,402,223		Nauman, Jr. et al.	09/1983	
	AO	4,408,612		Utsugi	10/1983	
	AP	4,442,842		Baba	04/1984	
	AQ	4,466,443		Utsugi	08/1984	
	AR	4,466,444		Baba	08/1984	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
MA	AS	EP	0088620			09/1983		
	AT	EP	0163502			12/1985		
	AU	EP	0234951			09/1987		
	AV	DE	2305501			08/1974		
	AW	FR	2424733			11/1979		
	AX	PCT	8301893			06/1983		
	AY							

Examiner Signature		Date Considered	052505
-----------------------	--	--------------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

OC143433.1

Please type a plus sign (+) inside this box



PTO/SB/08A (10-96)

Approved for use through 10/31/99 OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO-1449A/PTO			<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	To be assigned	
			Filing Date	On even date herewith	
			First Named Inventor	Yock, Paul G.	
			Group Art Unit	3737 (prior app. S/N 10/438,111)	
			Examiner Name	F. Jaworski	
Sheet	2	of	6	Attorney Docket Number	701470.4086

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	BA	4,475,553		Yamaguchi et al.	10/1984	
	BB	4,489,727		Matsuo et al.	12/1984	
	BC	4,489,728		Matsuo et al.	12/1984	
	BD	4,494,549		Namba et al.	01/1985	
	BE	4,546,771		Eggleton et al.	10/1985	
	BF	4,561,446		Hetz	12/1985	
	BG	4,558,706		Nakada et al.	12/1985	
	BH	4,572,201		Kondo et al.	03/1986	
	BI	4,572,203		Feinstein	02/1986	
	BJ	4,576,177		Webster, Jr.	02/1986	
	BK	4,582,067		Silverstein et al.	04/1986	
	BL	4,587,972		Morante, Jr.	05/1986	
	BM	4,633,882		Matsuo et al.	01/1987	
	BN	4,641,657		Ellis	02/1987	
	BO	4,669,465		Moore et al.	06/1987	
	BP	4,669,469		Gifford, III, et al.	06/1987	
	BQ	4,732,156		Nakamura	03/1988	
	BR	4,748,982		Horzewski et al.	06/1988	
	BS	4,771,788		Millar	09/1988	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	BT							
	BU							
	BV							
	BW							
	BX							
	BY							

Examiner Signature		Date Considered	052505
-----------------------	--	--------------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box +

PTO/SB/08A (10-96)

Approved for use through 10/31/99 OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO-1449A/PTO  <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>				<b>Complete if Known</b>	
Application Number		To be assigned			
Filing Date		On even date herewith			
First Named Inventor		Yock, Paul G.			
Group Art Unit		3737 (prior app. S/N 10/438,111)			
Examiner Name		F. Jaworski			
Attorney Docket Number		701470.4086			
Sheet	3	of	6		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
↓	CA	4,794,931		Yock	01/1989	
	CB	4,841,977		Griffith et al.	06/1989	
	CC	4,887,605		Angelsen et al.	02/1990	
	CD	4,887,606		Yock et al.	12/1989	
	CE	4,899,757		Pope, Jr., et al.	02/1990	
	CF	4,911,170		Thomas, III, et al.	03/1990	
	CG	4,917,097		Proudian et al.	04/1990	
	CH	4,917,104		Rebell	04/1990	
	CI	4,920,967		Cottonaro et al.	04/1990	
	CJ	4,928,699		Sasai	05/1990	
	CK	4,951,677		Crowley et al.	08/1990	
	CL	4,967,753		Haase et al.	11/1990	
	CM	4,991,588		Pfleuger et al.	02/1991	
	CN	4,998,916		Hammerslag et al.	03/1991	
	CO	5,000,185		Yock	03/1991	
	CP	5,002,059		Crowley et al.	03/1991	
	CQ	5,007,434		Doyle et al.	04/1991	
CR	5,029,588		Yock et al.	07/1991		

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	CS							
	CT							
	CU							
	CV							
	CW							
	CX							
	CY							

Examiner Signature		Date Considered	052505
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

OC143433.1

Please type a plus sign (+) inside this box

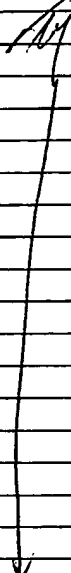


PTO/SB/08A (10-96)

Approved for use through 10/31/99 OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO-1449A/PTO  <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>			<b>Complete if Known</b>		
			Application Number	To be assigned	
			Filing Date	On even date herewith	
			First Named Inventor	Yock, Paul G.	
			Group Art Unit	3737 (prior app. S/N 10/438,111)	
			Examiner Name	F. Jaworski	
			Attorney Docket Number	701470.4086	
Sheet	4	of	6		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	DA	5,040,548		Yock	08/1991	
	DB	5,049,130		Powell	09/1991	
	DC	5,061,273		Yock	10/1991	
	DD	5,115,814		Griffith	05/1992	
	DE	5,300,085		Yock	04/1994	
	DF	5,311,871		Yock	04/1994	
	DG	5,313,949		Yock	04/1994	
	DH	5,350,395		Yock	09/1994	
	DI	5,451,207		Yock	09/1995	
	DJ	5,451,233		Yock	09/1995	
	DK	5,496,346		Horzewski et al.	03/1996	
	DL	5,501,277		Yock	03/1996	
	DM	5,582,178		Yock	12/1996	
	DN	5,596,990		Yock et al.	01/1997	
	DO	5,651,364		Yock	07/1997	
	DP	5,865,178		Yock	02/1999	
DQ	6,221,015		Yock	04/2001		
DR	6,409,673		Yock	06/2002		

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	DS							
	DT							
	DU							
	DV							
	DW							
	DX							
	DY							

Examiner Signature		Date Considered	052505
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

OC143433.1

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form PTO-1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	To be assigned
				Filing Date	On even date herewith
				First Named Inventor	Yock, Paul G.
				Group Art Unit	3737 (prior app. S/N 09/816,586)
				Examiner Name	F. Jaworski
Sheet	5	of	6	Attorney Docket Number	273/122

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
--------------------	-----------------------	--	----------------

EA	Bertini et al., "Rotating Probe for Trans-Esophageal Cross-Sectional Echocardiography," J. Nuc. Med. Allied Sci. 28(2):115-121	
EB	Bom et al., "Early and Recent Intraluminal Ultrasound Devices," International Journal of Cardia: Imaging, 4:79-88, (1989).	
EC	Bom et al., "Ein Weg sur Intraluminaren Echoateriographie" Untraschall 8 pp. 233-236 (Oct. 1987) (translation attached).	
ED	Crowley et al., "Optimized Ultrasound Imaging Catheters for Use in the Vascular System," Int. J. Car. Imag. 4:145-151, (1989).	
EE	Ebina et al., "The Diagnostic Application of Ultrasound to the Disease in Mediastinal Organs," Sci. Rep. Res. Inst. Tohoku U. 12:199-212.	
EF	Eggleton et al., "Computerized Ultrasonic Visualization of Dynamic Ventricular Configurations," 8 <sup>th</sup> ICMBE, Chicago, Ill. (Jul. 1969).	
EG	Engin., pp. 168-171.	
EH	Fukuda, M., "Endoscopic Ultrasonography," In: Gill, R.W., Dadd, M.J. eds., WFUMB '85, 13-16 (1985).	
EI	Garret, L., "A Catheter Assembly," PCT Application No. PCT/US82/01669, Published as WO83/01893 on Jun 9, 1983.	
EJ	Gichard et al., "Development of the Mechanically Scanned Doppler Blood Flow Catheter," Ultrasonics Symposium Proc. 75, CHO-994-4SU, pp. 18-21 (1975).	
EK	Handley et al., Abstract, "The Development of an Ultrasonic Endoscope for the Assessment of Arterial Wall Disease," Proceedings of the British Medical Ultrasound Society, p. 689, July 1985.	
EL	Hartley et al., "A Single-Crystal Ultrasonic Catheter-Tip Velocity Probe," Medical Instrumentation 8:241-243.	
EM	Hisanaga et al., "A New Real-Time Sector Scanning System of Ultra-Wide Angle. . .," Proc. of the 22 <sup>nd</sup> Annual Mtg. of the AIUM (1978)	
EN	Hisanaga et al., "Transesophageal Cross-Sectional Echocardiography," American Heart Journal, pp. 607-609, (Nov. 1980).	
EO	Hisanaga et al., Proc. Jap. Soc. Ultrasonics Med., 32:43-44, (1977).	
EP	Isner, et al., "Percutaneous Intravascular US as Adjunct to Catheter-Based Interventions: . . . Radiology," 175(1):61-70, (1990).	
EQ	Kossoff, G., "Diagnostic Applications of Ultrasound in Cardiology," Aust. Radiol., X:101-6 (1966).	
FA	Olson et al., IEEE Transactions on Biomed, (1974).	

Examiner Signature	DOC SOC1:143433.1	Date Considered	052505
--------------------	-------------------	-----------------	--------


\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1985, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Substitute for form PTO-1449B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	To be assigned		
		Filing Date	On even date herewith		
		First Named Inventor	Yock, Paul G.		
		Group Art Unit	3737 (prior app. S/N 09/816,586)		
		Examiner Name	F. Jaworski		
Sheet	6	of	6	Attorney Docket Number	273/122
<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T <sup>2</sup>
FB	Omoto, Jap. Heart J., 8:569-581, (1967).				
FC	Omoto, R., "Intracardiac Scanning of the Heart with the Aid of Ultrasonic Intravenous Probe," Jap. Heart J., 8:569-581, (1967).				
FD	Omoto, R., "Ultrasonic Tomography of the Heart: An Intracardiac Scan Method," Ultrasonics, pp. 80-83, (Apr. 1967)				
FE	Serruys et al., Am. J. Cardiol., 61:253-259, (1988).				
FF	Simpson, J.B., "Atherectomy Device & Method," European Patent Application No. 0 163 502, Published Apr. 12, 1985.				
FG	Slager et al., JACC, vol. 5, No. 6, pp. 1382-1386 (1985).				
FH	Wells et al., "Ultrasonic Transesophageal Measurement of Cardiac Output," Conference: Advances in Bioengineering, San Francisco, California, (Dec. 1978).				
FI	Wells, P.N.T., "Developments in Medical Ultrasonics," European Symposium on Medical Electronics, pp. 272-276 (Oct. 1975).				
FJ	Wells, World Medical Electronics, pp. 272-276 (1966).				
FK	Wild et al., "Ultrasonic Ranging," Electronics, pp. 174-180 (Mar. 1955).				
FL	Wild et al., Am. Inst. Ultrasonics Med., pp. 47-72, (Aug. 1955).				
FM					
FN					
FO					

Examiner Signature	DOCSOC1:143433.1 	Date Considered	052505
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.